

REMARKS

The Applicant appreciates the thorough review of the application by Examiner Phan.

Reconsideration and allowance are requested.

No new matter has been added by the amendments. No new issues are raised by the amendments.

Claims 1 - 4 are patentable under 35 U.S.C. 103(a) over AAPA in view of Abbondanzio et al (6,931,568).

Claims 1 - 4 are patentable under 35 U.S.C. 103(a) over AAPA in view of Abbondanzio because neither reference, alone or in combination, teaches or suggests all of the elements of the claims.

Claims 1 and 4 are patentable over AAPA in view of Abbondanzio because neither reference teaches or suggests a center arbitration method, a plurality of CPU boards that execute the same processes synchronously, or that when one of the CPU boards is down, the system is restored by detaching the down CPU board from the bus and attaching the detached CPU board to the bus again as power for the whole system is supplied.

Neither reference teaches or suggests a center arbitration method, wherein a single bus arbiter is connected to a plurality of CPUs via a common bus. In the disclosed prior art, each CPU board has its own bus arbiter.

In addition, neither reference teaches a plurality of CPU boards that execute the same processes synchronously. Executing processes synchronously requires that there be no time lag between the time when an error is caused and when it is detected. However, in the prior art control

system there is a time lag between when an error is caused and when it is detected. Eliminating that time lag was a primary motivation for the present invention.

Furthermore, neither reference teaches or suggests that when one of the CPU boards is down, the system is restored by detaching the down CPU board from the bus and attaching the detached CPU board to the bus again as power for the whole system is supplied. The service processor of Abbondanzio is merely reset, and not detached and reattached, when the processor hangs.

The references cannot render claim 1 or 4 obvious because they do not, alone or in combination, teach or suggest all of the elements of claim 1 or 4.

Claim 2 is dependent on independent and patentable claim 1 and adds the additional patentable feature that even if one of the CPU boards or power sources is down, the system is restored by detaching said down CPU board or said down power source from said bus and attaching said detached CPU board or said detached power source to said bus again as power for the whole system being supplied. Neither reference teaches or suggests this element. The lines in Abbondanzio cited by Examiner do not speak to system restoration by detaching and reattaching a power source or CPU board.

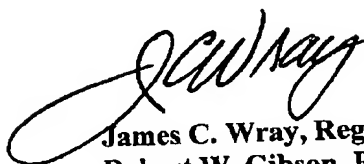
Claim 3 is dependent on independent and patentable claim 1 and adds the additional patentable features that when one of the CPU or IO boards is down, the system controller assigns the right to use the bus to another CPU or IO board of the duplex IO board system and that if one of the CPU boards, IO boards, or power sources is down, the system is restored by detaching the down CPU board, IO board, or power source from the bus and reattaching the device to the bus. Neither Abbondanzio nor AAPA teaches or suggests these elements. The lines cited by examiner do not discuss detaching and reattaching CPU boards, IO boards, or power sources in order to restore a

system. Examiner has not cited lines to support the assertion that Abbondanzio discloses a system controller that assigns the right to use a bus to another CPU or IO board of a duplex IO board system if one CPU or IO board is down. Applicant is unable to locate this disclosure and requests a citation to specific lines in the reference. Because no references, alone or in combination, teach or suggest all of the elements of claim 3, claim 3 is patentable under 35 U.S.C. 103(a).

CONCLUSION

Reconsideration and allowance are respectfully requested.

Respectfully,



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